

Model Paper – 2
Hi-Tech Institute of Engineering & Technology
B.C.A. Examination
(Semester-3rd) Odd Semester
Computer Architecture & Assembly Language
(BCA-303)

Time: 3 Hours

Maximum Marks: 75

Faculty Name: Ms. Charu Singh

Note: Attempt questions from all sections as per instructions.

Section – A

Note: Attempt all questions.

5 x 3 = 15

1. Define and explain cache memory.
2. Write about Flag register in 8085.
3. Differentiate between micro instruction and micro programmed.
4. Write an assembly language program to add two nos.
5. Differentiate between isolated I/O and memory mapped I/O.

Section – B

Note: Attempt any two questions.

2 x 7.5 = 15

6. What is Booth algorithm? Multiply 24 and -7 using Booth Algorithm.
7. Differentiate between direct and indirect addressing mode with an example.
8. What are the steps for a simple instruction cycle? Explain fetch cycle and indirect cycle using register transfer language.

Section – C

Note: Attempt any three questions.

3 x 15 = 45

9. (a) Describe Direct Memory Access (DMA).
(b) Explain role of register transfer in computer architecture.
(c) Program loops in assembly language
(d) Operation code
10. Discuss various logical instructions, Machine control instructions and Program control instructions in the Assembly Language.
11. (a) List five important characteristics of RISC and CISC Architecture.
(b) Differentiate b/w hardwired control unit Vs Micro programmed control unit.
(c) Explain Interrupt Drive I/O in detail
(d) Explain subroutine in assembly language.
12. Write short note on:
 - a. Memory influence memory
 - b. Floating point representation
 - c. 8 bit Microprocessor
13. Draw and explain the architecture of 8085 microprocessor along with all its registers and instruction set.